

<Online Flight Tracking System>

Software Modeling

<Phase 2>

<April 22, 2018>

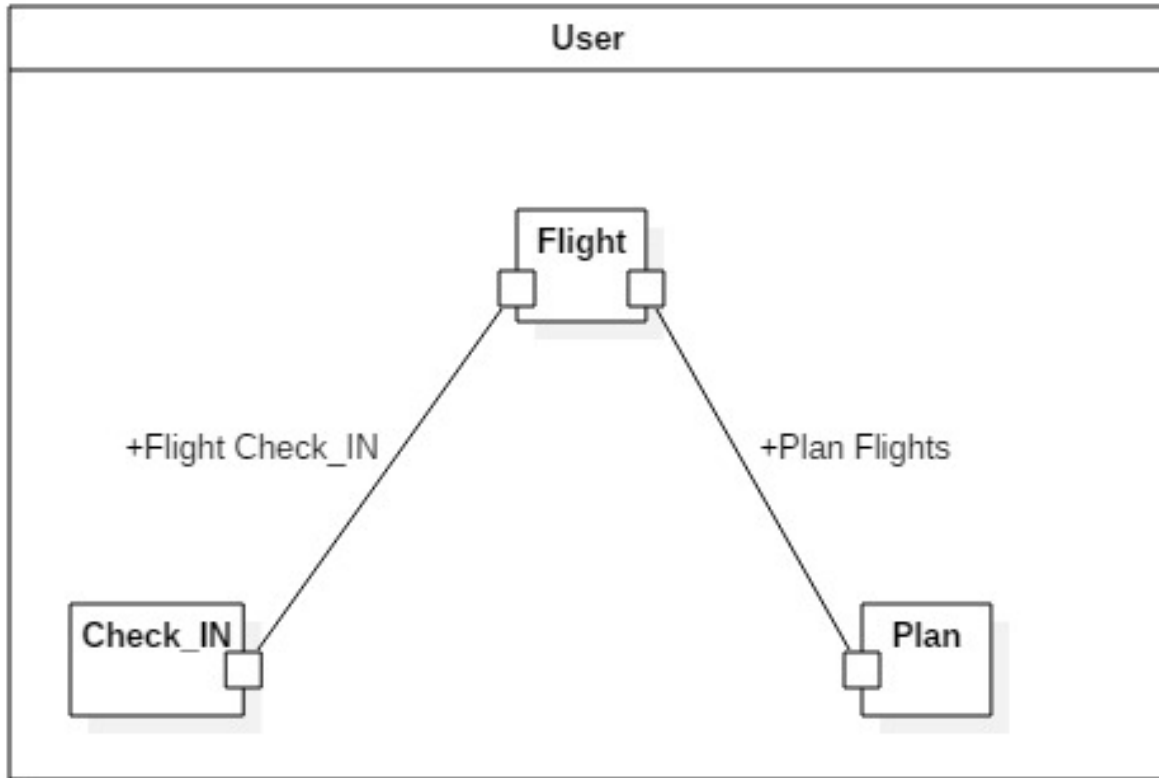
<Abdulrhman Ali Alsenedi/436101804>

<Abdulmajeed Saleh Alaskar/436104024>

<Khalid Abdulhadi Alqahtani/434105057>

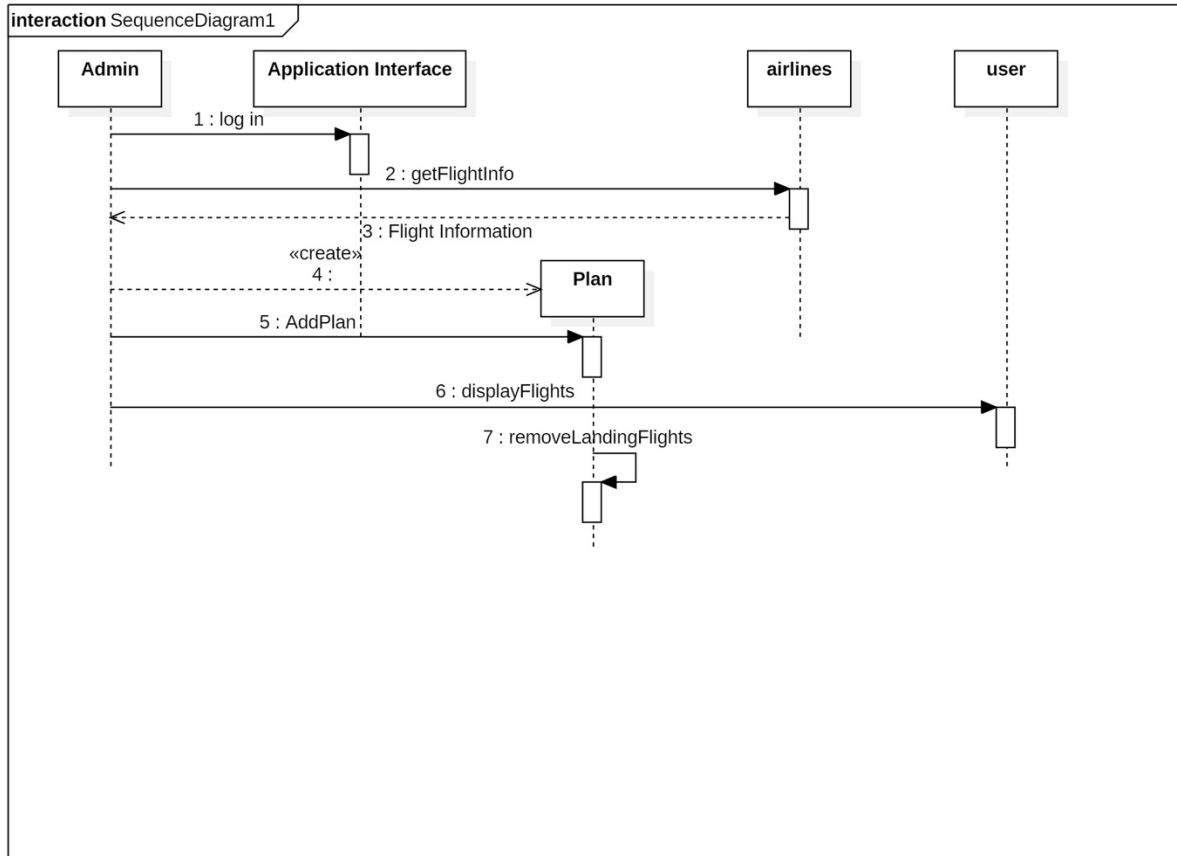
<Asim Mohammed Alali/435102899>

Composite Diagram :

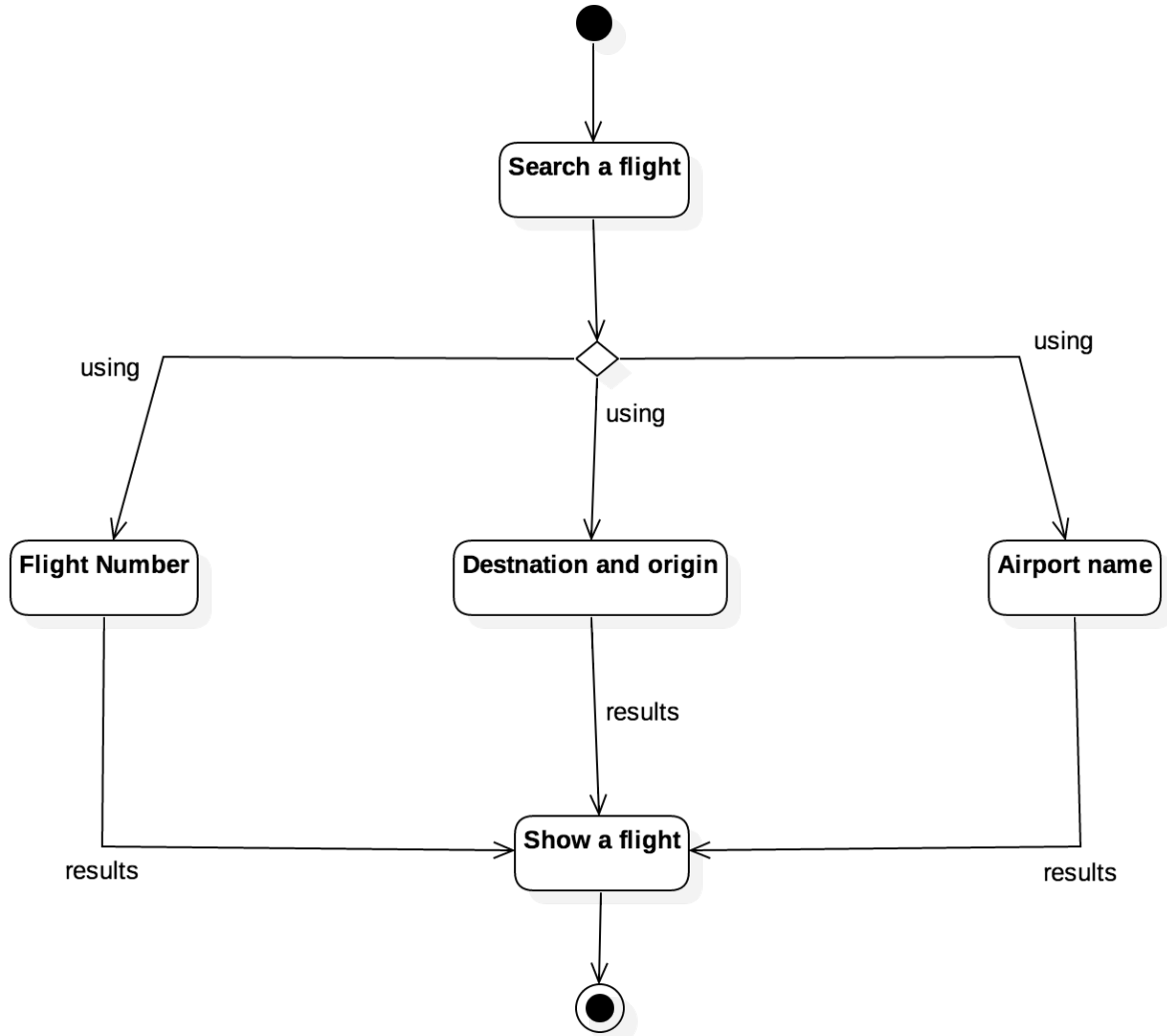


We need composite diagram for User class because it is the point where to many classes join and communicate depending on event that's trigger by User class

Sequence Diagram & Communication for critical use cases :

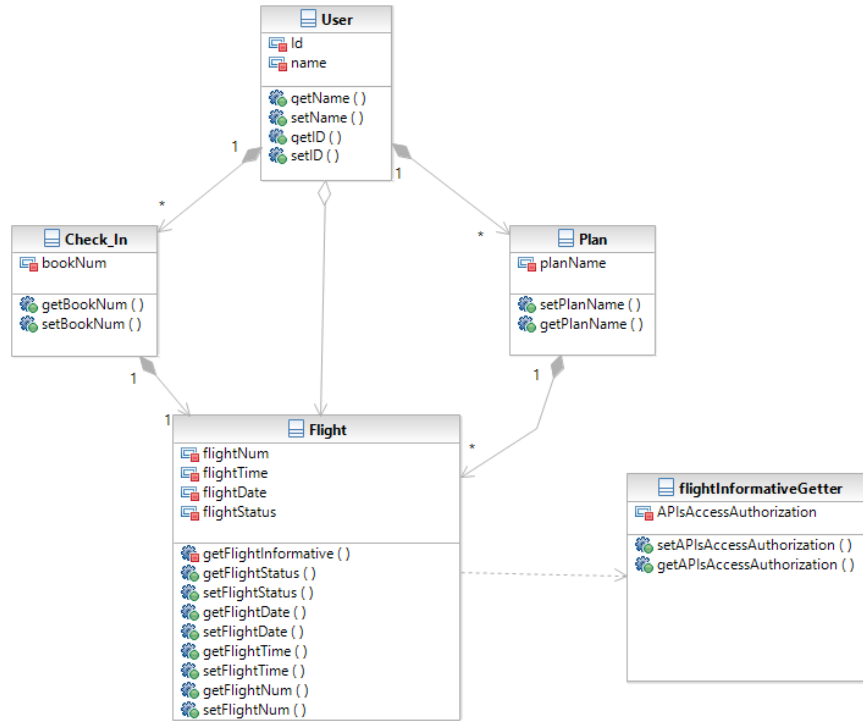


State Diagram :



Java Code Transformation:

UML Diagram



Java Code Transformation

```
/**
 *
 */

import java.util.Set;

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @author 36s467
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform)"
 */
public class User {
    /**
     * <!-- begin-UML-doc -->
     * <!-- end-UML-doc -->
     * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform)"
     */
    private Object Id;
    /**
     * <!-- begin-UML-doc -->
     * <!-- end-UML-doc -->
     * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform)"
     */
    private Object name;
    /**
     * <!-- begin-UML-doc -->
     * <!-- end-UML-doc -->
     * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform)"
     */
    private Set<Plan> plan;
    /**
     * <!-- begin-UML-doc -->
     * <!-- end-UML-doc -->
     * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform)"
     */
    private Set<Check_In> check In;
    /**
     * <!-- begin-UML-doc -->
     * <!-- end-UML-doc -->
     * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform)"
     */
    private Set<Flight> flight;
}
```

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```
*/
public void getName() {
    // begin-user-code
    // TODO Auto-generated method stub

    // end-user-code
}

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform)"
*/
public void setName() {
    // begin-user-code
    // TODO Auto-generated method stub

    // end-user-code
}

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform)"
*/
public void getID() {
    // begin-user-code
    // TODO Auto-generated method stub

    // end-user-code
}

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform)"
*/
public void setID() {
    // begin-user-code
    // TODO Auto-generated method stub

    // end-user-code
}
}

=====
```

```
/**
 *
 */
```

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```
import java.util.Set;

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @author 36s467
 * @generated "UML to Java
 (com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
 */
public class Plan {
    /**
     * <!-- begin-UML-doc -->
     * <!-- end-UML-doc -->
     * @generated "UML to Java
 (com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
     */
    private Object planName;
    /**
     * <!-- begin-UML-doc -->
     * <!-- end-UML-doc -->
     * @generated "UML to Java
 (com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
     */
    private Set<Flight> flight;

    /**
     * <!-- begin-UML-doc -->
     * <!-- end-UML-doc -->
     * @generated "UML to Java
 (com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
     */
    public void setPlanName() {
        // begin-user-code
        // TODO Auto-generated method stub

        // end-user-code
    }

    /**
     * <!-- begin-UML-doc -->
     * <!-- end-UML-doc -->
     * @generated "UML to Java
 (com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
     */
    public void getPlanName() {
        // begin-user-code
        // TODO Auto-generated method stub

        // end-user-code
    }
}

=====
/**
 *
 */

/**
```


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```
* <!-- begin-UML-doc -->
* <!-- end-UML-doc -->
* @author 36s467
* @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
*/
public class Check_In {
/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
*/
    private Object bookNum;
/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
*/
    private Flight flight;

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
*/
    public void getBookNum() {
        // begin-user-code
        // TODO Auto-generated method stub

        // end-user-code
    }

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
*/
    public void setBookNum() {
        // begin-user-code
        // TODO Auto-generated method stub

        // end-user-code
    }
}

=====

/**
 *
 */

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
```

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```
* @author 36s467
* @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
*/
public class Flight {
    /**
     * <!-- begin-UML-doc -->
     * <!-- end-UML-doc -->
     * @generated "UML to Java
     (com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
     */
    private Object flightNum;
    /**
     * <!-- begin-UML-doc -->
     * <!-- end-UML-doc -->
     * @generated "UML to Java
     (com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
     */
    private Object flightTime;
    /**
     * <!-- begin-UML-doc -->
     * <!-- end-UML-doc -->
     * @generated "UML to Java
     (com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
     */
    private Object flightDate;
    /**
     * <!-- begin-UML-doc -->
     * <!-- end-UML-doc -->
     * @generated "UML to Java
     (com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
     */
    private Object flightStatus;

    /**
     * <!-- begin-UML-doc -->
     * <!-- end-UML-doc -->
     * @generated "UML to Java
     (com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
     */
    private void getFlightInformative() {
        // begin-user-code
        // TODO Auto-generated method stub

        // end-user-code
    }

    /**
     * <!-- begin-UML-doc -->
     * <!-- end-UML-doc -->
     * @generated "UML to Java
     (com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
     */
    public void getFlightStatus() {
        // begin-user-code
        // TODO Auto-generated method stub
    }
}
```

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```
// end-user-code
}

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform)"
 */
public void setFlightStatus() {
    // begin-user-code
    // TODO Auto-generated method stub

    // end-user-code
}

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform)"
 */
public void getFlightDate() {
    // begin-user-code
    // TODO Auto-generated method stub

    // end-user-code
}

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform)"
 */
public void setFlightDate() {
    // begin-user-code
    // TODO Auto-generated method stub

    // end-user-code
}

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform)"
 */
public void getFlightTime() {
    // begin-user-code
    // TODO Auto-generated method stub

    // end-user-code
}

/**
 * <!-- begin-UML-doc -->
```

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```
* <!-- end-UML-doc -->
* @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform)"
*/
public void setFlightTime() {
    // begin-user-code
    // TODO Auto-generated method stub

    // end-user-code
}

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform)"
*/
public void getFlightNum() {
    // begin-user-code
    // TODO Auto-generated method stub

    // end-user-code
}

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform)"
*/
public void setFlightNum() {
    // begin-user-code
    // TODO Auto-generated method stub

    // end-user-code
}
}
```

```
/**
 *
 */

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @author 36s467
```

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```
* @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
*/
public class flightInformativeGetter {
/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
 */
    private Object APIsAccessAuthorization;

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
 */
    public void setAPIsAccessAuthorization() {
        // begin-user-code
        // TODO Auto-generated method stub

        // end-user-code
    }

/**
 * <!-- begin-UML-doc -->
 * <!-- end-UML-doc -->
 * @generated "UML to Java
(com.ibm.xtools.transform.uml2.java5.internal.UML2JavaTransform) "
 */
    public void getAPIsAccessAuthorization() {
        // begin-user-code
        // TODO Auto-generated method stub

        // end-user-code
    }
}
```